

1/3

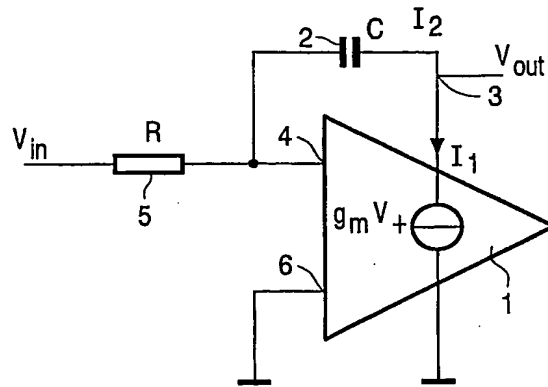


FIG. 1 PRIOR ART

$$I_2 = \frac{V_{out} - V_{in}}{1/sC + R} \quad \text{Equation 1}$$

$$I_1 = g_m V_+ = \frac{g_m V_{in} / sC + g_m V_{out} R}{1/sC + R} \quad \text{Equation 2}$$

$$V_+ = \frac{V_{in} / sC + V_{out} R}{1/sC + R} \quad \text{Equation 3}$$

$$I_1 + I_2 = 0 \quad \text{Equation 4}$$

$$\Rightarrow V_{out} - V_{in} + g_m V_{in} / sC + g_m V_{out} R = 0 \quad \text{Equation 5}$$

$$\Rightarrow \frac{V_{out}}{V_{in}} = - \frac{1 - sC / g_m}{s(1/g_m + R)C} \quad \text{Equation 6}$$

FIG. 5

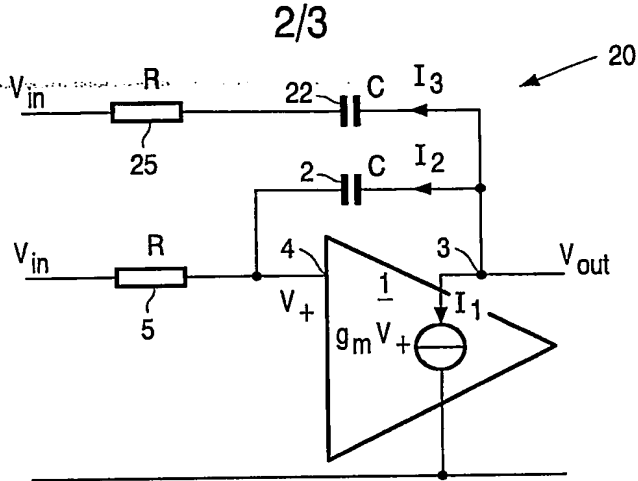


FIG. 2

$$I_2 = \frac{V_{out} - V_{in}}{1/sC + R}$$

Equation 7

$$I_3 = \frac{V_{out} + V_{in}}{1/sC + R}$$

Equation 8

$$I_2 + I_3 = \frac{2V_{out}}{1/sC + R}$$

Equation 9

$$V_+ = \frac{V_{in}/sC + V_{out} R}{1/sC + R}$$

Equation 10

$$\Rightarrow I_1 = \frac{g_m V_{in}/sC + g_m V_{out} R}{1/sC + R}$$

Equation 11

$$I_1 + I_2 + I_3 = 0$$

Equation 12

$$g_m V_{in}/sC + g_m V_{out} R + 2V_{out} = 0$$

Equation 13

$$\frac{V_{out}}{V_{in}} = - \frac{1}{s(2/g_m + R)C}$$

Equation 14

FIG. 6

3/3

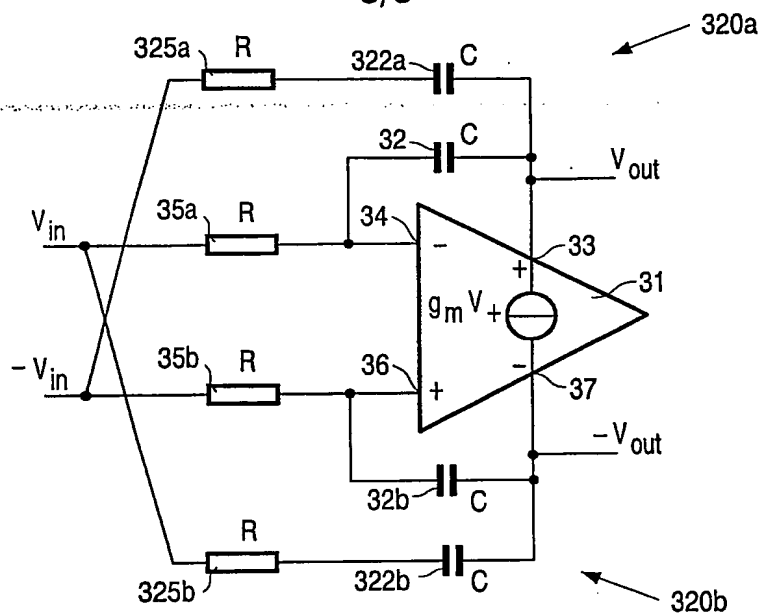


FIG. 3

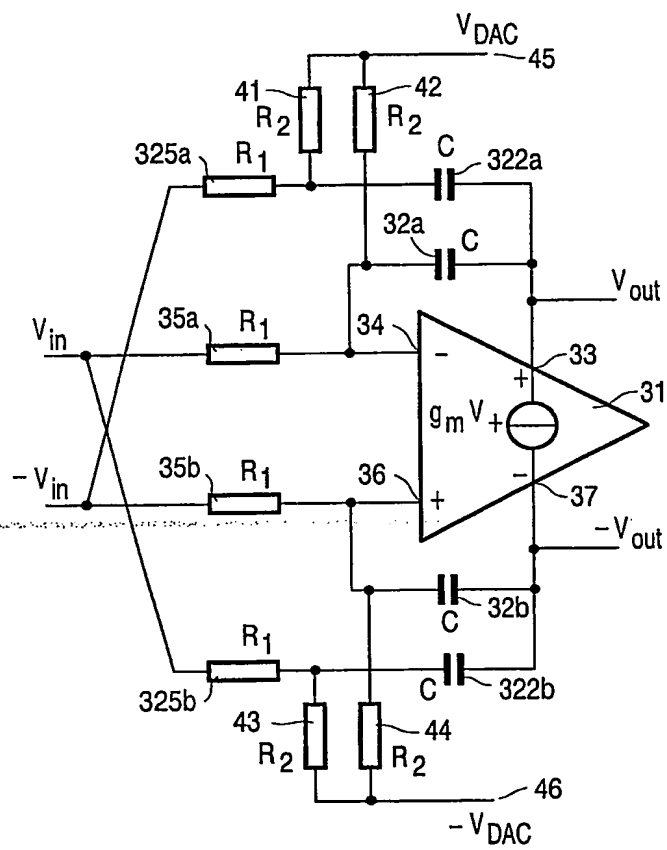


FIG. 4